

SAFETY DATA SHEET

According to JIS Z 7253:2019
Revision date 01-Mar-2024
 Revision Number 1.06

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Cobalt Naphthenate, Mineral Spirit Solution (Co:5%)
Product Code	031-25715

Supplier FUJIFILM Wako Pure Chemical Corporation
 1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan
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Recommended uses For research use only

Restrictions on use Seek expert judgment when using for purposes other than those recommended.

Section 2: HAZARDS IDENTIFICATION

GHS classification

Classification of the substance or mixture

Flammable liquids	Category 3
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2B
Skin sensitization	Category 1
Carcinogenicity	Category 2
Reproductive Toxicity	Category 1B
Specific target organ toxicity (single exposure)	Category 2, Category 3
Category 2 central nervous system, respiratory system, liver, kidneys	
Category 3 Respiratory irritation, Narcotic effects	
Specific target organ toxicity (repeated exposure)	Category 1
Category 1 central nervous system, respiratory system, nervous system	
Aspiration hazard	Category 1
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

Pictograms



Signal word

Danger

Hazard statements

- H226 - Flammable liquid and vapour
- H315 - Causes skin irritation
- H320 - Causes eye irritation
- H351 - Suspected of causing cancer
- H360 - May damage fertility or the unborn child
- H335 - May cause respiratory irritation
- H336 - May cause drowsiness or dizziness
- H304 - May be fatal if swallowed and enters airways
- H317 - May cause an allergic skin reaction

H400 - Very toxic to aquatic life
 H410 - Very toxic to aquatic life with long lasting effects
 H371 - May cause damage to the following organs: central nervous system, respiratory system, liver, kidneys
 H372 - Causes damage to the following organs through prolonged or repeated exposure: central nervous system, respiratory system, nervous system

Precautionary statements-(Prevention)

- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Use personal protective equipment as required
- Wash face, hands and any exposed skin thoroughly after handling
- Contaminated work clothing should not be allowed out of the workplace
- Wear protective gloves
- Do not breathe dust/fume/gas/mist/vapors/spray
- Do not eat, drink or smoke when using this product
- Use only outdoors or in a well-ventilated area
- Avoid release to the environment
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
- Keep container tightly closed
- Ground/bond container and receiving equipment
- Use explosion-proof electrical/ ventilating / lighting / equipment
- Use only non-sparking tools
- Take precautionary measures against static discharge
- Keep cool

Precautionary statements-(Response)

- IF exposed or concerned: Get medical advice/attention
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- If eye irritation persists: Get medical advice/attention
- If skin irritation or rash occurs: Get medical advice/attention
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- Wash contaminated clothing before reuse
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
- Do NOT induce vomiting
- In case of fire: Use suitable extinguishing media for extinction
- Collect spillage

Precautionary statements-(Storage)

- Store locked up
- Store in a well-ventilated place. Keep container tightly closed

Precautionary statements-(Disposal)

- Dispose of contents/container to an approved waste disposal plant

Others

Other hazards Not available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture Mixture

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
Cobalt Naphthenate	50	N/A	(8)-630	*	61789-51-3
Mineral Spirit	50	N/A	N/A	*	8052-41-3

Note on ISHL No.: * in the table means announced chemical substances.

Section 4: FIRST AID MEASURES**Inhalation**

Remove to fresh air. If symptoms persist, call a physician.

Skin contact

Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

Eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate medical attention is required.

Ingestion

Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

Protection of first-aiders

Use personal protective equipment as required.

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing media

Carbon dioxide (CO₂), Foam, Extinguishing powder, Sand

Unsuitable extinguishing media

No information available

Specific hazards arising from the chemical product

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Vapors may form explosive mixtures with air

Special extinguishing method

No information available

Special protective actions for fire-fighters

Use personal protective equipment as required. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipments to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.

Environmental precautions

To be careful not discharged to the environment without being properly handled waste water contaminated.

Methods and materials for contaminant and methods and materials for cleaning up

Absorb dry sand, earth, sawdust and the waste. Collect empty container that can be sealed.

Recovery, neutralization

No information available

Secondary disaster prevention measures

Clean contaminated objects and areas thoroughly observing environmental regulations.

Section 7: HANDLING AND STORAGE

Handling**Technical measures**

Highly flammable. Avoid contact with high temperature objects, spark, and strong oxidizing agents. Use with local exhaust ventilation.

Precautions

Do not rough handling containers, such as upsetting, falling, giving a shock, and dragging. Prevent leakage, overflow, and scattering. Not to generate steam and dust in vain. Seal the container after use. After handling, wash hands and face, and then gargle. In places other than those specified, should not be smoking or eating and drinking. Should not be brought contaminated protective equipment and gloves to rest stops. Deny unnecessary entry of non-emergency personnel to the handling area.

Safety handling precautions

Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use personal

protective equipment as required. Avoid contact with skin, eyes or clothing.

Storage**Safe storage conditions****Storage conditions**

Store away from sunlight in well-ventilated place at room temperature (preferably cool).
Keep container tightly closed.

Safe packaging material

Glass

Incompatible substances

Strong oxidizing agents

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

Exposure limits

Chemical Name	JSOH (Japan)	ISHL (Japan)	ACGIH
Cobalt Naphthenate 61789-51-3	TWA: 0.05 mg/m ³ OEL	N/A	N/A
Trimethylbenzene, mixed isomers 25551-13-7	N/A	N/A	TWA: 10 ppm
1,2,4-Trimethylbenzene 95-63-6	TWA: 25 ppm OEL TWA: 120 mg/m ³ OEL	N/A	TWA: 10 ppm
Nonane 111-84-2	TWA: 200 ppm OEL TWA: 1050 mg/m ³ OEL	N/A	TWA: 200 ppm
Mesitylene 108-67-8	TWA: 25 ppm OEL TWA: 120 mg/m ³ OEL	N/A	TWA 25ppm
Xylene 1330-20-7	TWA: 50 ppm OEL TWA: 217 mg/m ³ OEL ISHL/ACL: 50 ppm	ISHL/ACL: 50 ppm	TWA: 20 ppm
Cumene 98-82-8	TWA: 10 ppm OEL TWA: 50 mg/m ³ OEL Skin	N/A	TWA: 5 ppm

Chemical Name	Concentration standard value set by the Minister of Health, Labor and Welfare (8hr)	Concentration standard value set by the Minister of Health, Labor and Welfare (Short-Term)
Cumene 98-82-8	10 ppm	N/A

Personal protective equipment**Respiratory protection**

gas mask for organic gas (JIS T 8152)

Hand protection

chemical protective gloves (JIS T 8116)

Eye protection

protective eyeglasses or chemical safety goggles (JIS T 8147)

Skin and body protection

Long-sleeved work clothes

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

If this product is classified as "Chemical Substances Hazardous to Skin, etc.", use appropriate protective equipment to them.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Form**Color**

dark purple

Appearance

liquid

Odor

no data available

Melting point/freezing point	no data available
Boiling point, initial boiling point and boiling range	no data available
Flammability	no data available
Evaporation rate:	no data available
Flammability (solid, gas):	no data available
Upper/lower flammability or explosive limits	
Upper:	no data available
Lower:	no data available
Flash point	39.5 °C
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
pH	no data available
Viscosity (coefficient of viscosity)	no data available
Dynamic viscosity	no data available
Solubilities	toluene , hexane : soluble . water : practically insoluble,or insoluble .
n-Octanol/water partition coefficient:(log Pow)	no data available
Vapour pressure	no data available
Specific Gravity / Relative density	no data available
Vapour density	no data available
Particle characteristics	no data available

Section 10: STABILITY AND REACTIVITY

Stability

Reactivity	no data available
Chemical stability	Stable under recommended storage conditions.
Hazardous reactions	None under normal processing
Conditions to avoid	Extremes of temperature and direct sunlight, Heat, flames and sparks, static electricity, spark
Incompatible materials	Strong oxidizing agents
Hazardous decomposition products	Carbon monoxide (CO), Carbon dioxide (CO ₂), Metal oxides

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Cobalt Naphthenate	3900 mg/kg (Rat)	N/A	N/A
Trimethylbenzene, mixed isomers	8970 mg/kg (Rat)	N/A	N/A
1,2,4-Trimethylbenzene	3280 mg/kg (Rat)	N/A	18 mg/L (Rat) 4 h
Nonane	N/A	N/A	3200 ppm (Rat) 4 h(vapor)
Mesitylene	5000 mg/kg (Rat)	N/A	24 mg/L (Rat) 4 h
Xylene	3500 - 8800 mg/kg (Rat)	1700 mg/kg (Rabbit)	6350 - 6700 ppm (Rat) 4 h
Cumene	2700 mg/kg (Rat)	10600 mg/kg (Rabbit)	2645 ppm (Mouse) 4 h

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas-source information
Trimethylbenzene, mixed isomers	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
1,2,4-Trimethylbenzene	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Nonane	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Mesitylene	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

	classification results.	classification results.	classification results.
Xylene	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Cumene	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Chemical Name	Acute toxicity -inhalation vapor- source information	Acute toxicity -inhalation dust- source information	Acute toxicity -inhalation mist- source information
Trimethylbenzene, mixed isomers	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
1,2,4-Trimethylbenzene	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Nonane	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS Classification results.
Mesitylene	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS Classification results.
Xylene	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Cumene	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Skin irritation/corrosion

Chemical Name	Skin corrosion/irritation source information
Trimethylbenzene, mixed isomers	Based on the NITE GHS classification results.
1,2,4-Trimethylbenzene	Based on the NITE GHS classification results.
Nonane	Based on the NITE GHS Classification results.
Mesitylene	Based on the NITE GHS classification results.
Xylene	Based on the NITE GHS classification results.
Cumene	Based on the NITE GHS classification results.

Serious eye damage/ irritation

Chemical Name	Serious eye damage/irritation source information
Trimethylbenzene, mixed isomers	Based on the NITE GHS classification results.
1,2,4-Trimethylbenzene	Based on the NITE GHS classification results.
Nonane	Based on the NITE GHS classification results.
Mesitylene	Based on the NITE GHS classification results.
Xylene	Based on the NITE GHS classification results.
Cumene	Based on the NITE GHS classification results.

Respiratory or skin sensitization

Chemical Name	Respiratory or Skin sensitization source information
Trimethylbenzene, mixed isomers	Based on the NITE GHS classification results.
1,2,4-Trimethylbenzene	Based on the NITE GHS classification results.
Nonane	Based on the NITE GHS classification results.
Mesitylene	Based on the NITE GHS classification results.
Xylene	Based on the NITE GHS classification results.
Cumene	Based on the NITE GHS classification results.

Reproductive cell mutagenicity

Chemical Name	germ cell mutagenicity source information
Trimethylbenzene, mixed isomers	Based on the NITE GHS classification results.
1,2,4-Trimethylbenzene	Based on the NITE GHS classification results.
Nonane	Based on the NITE GHS classification results.
Mesitylene	Based on the NITE GHS classification results.
Xylene	Based on the NITE GHS classification results.
Cumene	Based on the NITE GHS classification results.

Carcinogenicity

Chemical Name	Carcinogenicity source information
Trimethylbenzene, mixed isomers	Based on the NITE GHS classification results.
1,2,4-Trimethylbenzene	Based on the NITE GHS classification results.
Nonane	Based on the NITE GHS classification results.
Mesitylene	Based on the NITE GHS classification results.
Xylene	Based on the NITE GHS classification results.
Cumene	Based on the NITE GHS classification results.

Chemical Name	NTP	IARC	ACGIH	JSOH (Japan)
Cobalt Naphthenate 61789-51-3	Reasonably Anticipated	Group 2B		Group 2B
Xylene 1330-20-7	-	Group 3		-
Cumene 98-82-8	-	Group 2B	A3	-

Reproductive toxicity

Chemical Name	Reproductive toxicity source information
Trimethylbenzene, mixed isomers	Based on the NITE GHS classification results.
1,2,4-Trimethylbenzene	Based on the NITE GHS classification results.
Nonane	Based on the NITE GHS classification results.
Mesitylene	Based on the NITE GHS classification results.
Xylene	Based on the NITE GHS classification results.
Cumene	Based on the NITE GHS classification results.

STOT-single exposure

Chemical Name	STOT -single exposure- source information
Trimethylbenzene, mixed isomers	Based on the NITE GHS classification results.
1,2,4-Trimethylbenzene	Based on the NITE GHS classification results.
Nonane	Based on the NITE GHS classification results.
Mesitylene	Based on the NITE GHS classification results.
Xylene	Based on the NITE GHS classification results.
Cumene	Based on the NITE GHS classification results.

STOT-repeated exposure

Chemical Name	STOT -repeated exposure- source information
Trimethylbenzene, mixed isomers	Based on the NITE GHS classification results.
1,2,4-Trimethylbenzene	Based on the NITE GHS classification results.
Nonane	Based on the NITE GHS classification results.
Mesitylene	Based on the NITE GHS classification results.
Xylene	Based on the NITE GHS classification results.
Cumene	Based on the NITE GHS classification results.

Aspiration hazard

Chemical Name	Aspiration Hazard source information
Trimethylbenzene, mixed isomers	Based on the NITE GHS classification results.
1,2,4-Trimethylbenzene	Based on the NITE GHS classification results.
Nonane	Based on the NITE GHS classification results.
Mesitylene	Based on the NITE GHS classification results.
Xylene	Based on the NITE GHS classification results.
Cumene	Based on the NITE GHS classification results.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Trimethylbenzene, mixed isomers	N/A	LC50:Pimephales promelas 7.72 mg/L 96 h	N/A
1,2,4-Trimethylbenzene	N/A	LC50 : Pimephales promelas 7.72 mg/L 96 h	EC50 : Daphnia magna 6.14 mg/L 48 h
Nonane	N/A	N/A	EC50 : Daphnia magna 0.2 mg/L 48 h
Mesitylene	N/A	LC50 : Carassius auratus 12.5 mg/L 96 h	LC50: Daphnia magna 6 mg/L 48 h
Xylene	N/A	LC50 : Oncorhynchus mykiss 3.3 mg/L	N/A
Cumene	EC50:Pseudokirchneriella	LC50 : Oncorhynchus mykiss	LC50 : Mysidopsis bahia

	<i>subcapitata</i> 2.6 mg/L 72 h	2.7 mg/L 96 h	1.2 mg/L 96 h
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Other data

Chemical Name	Short-term (acute) hazardous to the aquatic environment source information	Long-term (chronic) hazardous to the aquatic environment source information
Trimethylbenzene, mixed isomers	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
1,2,4-Trimethylbenzene	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Nonane	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Mesitylene	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Xylene	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Cumene	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Persistence and degradability	No information available
Bioaccumulative potential	No information available
Mobility in soil	No information available
Hazard to the ozone layer	No information available

Section 13: DISPOSAL CONSIDERATIONS

Waste from residues

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated container and contaminated packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14: TRANSPORT INFORMATION

ADR/RID

UN number	UN1993
Proper shipping name:	Flammable liquid, n.o.s. (Cobalt Naphthenate, Mineral Spirit Solution)
UN classification	3
Subsidiary hazard class	
Packing group	III
Marine pollutant	Yes

IMDG

UN number	UN1993
Proper shipping name:	Flammable liquid, n.o.s. (Cobalt Naphthenate, Mineral Spirit Solution)
UN classification	3
Subsidiary hazard class	
Packing group	III
Marine pollutant (Sea)	Yes
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

IATA

UN number	UN1993
Proper shipping name:	Flammable liquid, n.o.s. (Cobalt Naphthenate, Mineral Spirit Solution)
UN classification	3
Subsidiary hazard class	
Packing group	III
Environmentally Hazardous Substance	Yes

Section 15: REGULATORY INFORMATION

Japanese regulations

Fire Service Act	Category IV, Class II petroleums, dangerous grade 3
Poisonous and Deleterious Substances Control Law	Not applicable
Industrial Safety and Health Act	Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57) Notifiable Substances (Law Art.57-2) Class 3 Organic Solvents (Enforcement Order Attached Table No.6-2, Ordinance on Prevention of Organic Solvent Poisoning Art.1, Para.1, Item 5) Dangerous Substances - Flammable Substance (Enforcement Order Attached Table 1 Item 4)
Industrial Safety and Health Act (2024~)	【2024.4.1~】 Chemical Substances Hazardous to Skin, etc.(Regulations Article 594-2 Paragraph 1)
Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc	Priority Assessment Chemical Substances (Law Article 2, Para.5)
Regulations for the carriage and storage of dangerous goods in ship	Flammable Liquids (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)
Civil Aeronautics Law	Flammable Liquids (Ordinance Art.194, MITL Notification for Air Transportation of Explosives etc., Attached Table 1)
Pollutant Release and Transfer Register Law (2023.4.1-)	Class 1 Class 2
Class 1 - No.	132,691
Class 2 - No.	791
Export Trade Control Order	Not applicable

Pollution Release and Transfer Registry (~2023.3.31)

Class	Chemical Name in Regulation	(Metal Name)	Control number	Content Rate
Specified Class 1	Cobalt and its compounds		132	50 %
Specified Class 1	Trimethylbenzene		691	1,3,5-Trimethylbenzene 2 % 1,2,4-Trimethylbenzene 6 % Trimethylbenzene 8.5 %
Class 2	Nonane		791	5.5 %

Industrial Safety and Health Law

Law Name	Chemical Name in Regulation	Weight %	
Notifiable Substances (Law Art.57-2)	Cobalt and its compounds	50 %	
Notifiable Substances (Law Art.57-2)	Mineral spirits (including Mineral thinner, Petroleum spirits, White spirits and Mineral turpentine)	50 %	
Notifiable Substances (Law Art.57-2)	Trimethylbenzene	1,3,5-Trimethylbenzene 2 % 1,2,4-Trimethylbenzene 6 % Trimethylbenzene 8.5 %	
Notifiable Substances (Law Art.57-2)	Nonane	5.5 %	
Notifiable Substances (Law Art.57-2)	Xylene	0.9 %	
Notifiable Substances (Law Art.57-2)	Cumene	0.2 %	

Section 16: OTHER INFORMATION

Key literature references and sources for data etc.

NITE: National Institute of Technology and Evaluation (JAPAN)
<http://www.safe.nite.go.jp/japan/db.html>
 IATA dangerous Goods Regulations
 RTECS:Registry of Toxic Effects of Chemical Substances
 Japan Industrial Safety and Health Association GHS Model SDS
 Dictionary of Synthetic Organic Chemistry, SSOCJ, Koudansha Scientific Co.Ltd.

Chemical Dictionary, Kyouritsu Publishing Co., Ltd.
etc

Record of SDS revisions

The following contents were revised. Regulatory information.

Disclaimer

This SDS is according to JIS Z 7253: 2019. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

GHS Classification is according to JIS Z 7252:2019. *JIS: Japanese Industrial Standards

End of Safety Data Sheet